

ABSTRACT OF THE DISCLOSURE

A 22 kD sperm protein, SP22, correlates with fertility and predicts fertility in males. The protein can be assayed to detect decreases in fertility resulting from exposure to toxicants and pollutants which are known or suspected to decrease fertility. An antibody is generated to this protein, the antibody recognition by sperm in an epididymal sperm sample or ejaculate would reflect the fertility of the sample. This antibody can be used as a contraceptive to inactivate sperm, screen for toxicity, select animals for artificial insemination, and select men for assisted reproductive technologies. The protein itself can be inactivated by gene knockout, which is another approach to contraception, or the protein can be added to sperm from infertile men to make fertility techniques more feasible.